

Roll No. ....

Total Pages : 2

**BT-1/D-18**

**31038**

**PROGRAMMING FOR PROBLEM SOLVING**

Paper : ES-105 (A)

(Group – II)

Opt. (II)

Time : Three Hours]

[Maximum Marks : 75

**Note :** Attempt *five* questions in all, selecting at least *one* question from each unit. All questions carry equal marks.

**UNIT-I**

1. (a) Draw the block diagram of Computer and describe each block. 8
- (b) Explain Binary and Octal number systems with the help of suitable examples. 7
2. (a) Describe the following terms :
- (i) Debugger. 8
- (ii) Linker. 8
- (b) Write a short note on Problem-solving techniques. 7

**UNIT-II**

3. (a) Explain the arithmetic, relational, logical and conditional operators in C. 10
- (b) Write a short note on Precedence of operators. 5

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4. Explain different types of control statements in C. 15

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### UNIT-III

5. (a) Explain the concept of Array and its initialization with the help of an example. 8  
(b) What is the benefit of using functions ? 7
6. (a) Explain the concept of Recursion. 8  
(b) Write a short note on 'Parameter passing techniques' for functions. 7

### UNIT-IV

7. (a) Write a short note on Operations on pointers. 10  
(b) What do you understand by Dynamic memory allocation ? 5
8. (a) Explain the I/O operations on files. 8  
(b) Differentiate between Union and Structure. 7